

4545 and 4546

4545 and 4546

Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
State: California	
11-5613	
DESCRIPTIVE REPORT.	
Sheet No.	4545 4546
LOCALITY:	
Southern Coast	
Approaches to Newport Bay and	
Upper Part of Bay - 4545	
Newport Bay - Lower Part - 4546	
1926	
CHIEF OF PARTY:	
T. J. Maher	

U. S. COAST AND GEODETIC SURVEY

Col. E. Lester Jones, Director.

4545
4546

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC

SHEETS, NEWPORT BAY, CALIFORNIA.

Surveyed, April-May, 1926.

U.S.C. & G.S.S GUIDE
1926.

Thos. J. Maher,
Chief of Party.

August 16, 1926.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide reducers are approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET NO. 4545 and 4546

Locality: NEWPORT BAY, CALIF.

Chief of Party: T. J. MAHER IN 1926.

Plane of reference is M L L W

2. Ft. on tide staff at City Dock, Balboa

4.8 ft. " " " Entrance to Newport Bay.

0.3 ft. " " " Lagoon, Northern End of Newport Bay

For reduction of soundings, condition of records satisfactory
except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted
3. Time meridian not given at beginning of day's work.
4. Time (whether A. M. or P. M.) not given at beginning of day's work.
- X 5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

TIDE REDUCERS AND LEAD LINE CORRECTIONS WERE NOT ENTERED BY FIELD PARTY.

W. H. Harnauer
Chief, Division of Tides and Currents.

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEETS _____

NEWPORT BAY, CALIFORNIA, APRIL-MAY, 1926.

Instructions.

This work was done under instructions dated January 21, 1926.

Limits.

This survey includes a close development of Newport Bay and the offshore development from the beach to the 20 fathom curve, from approximately 1 mile east of the entrance to 4 miles westward of the entrance.

A scale of 1:10,000 was used for the offshore development and the northern arm of the Bay, the central portion of the Bay being executed on a scale of 1:5,000. On account of the common nature of the work on the two sheets, one descriptive report is made to cover both sheets.

Method.

The offshore sounding and development of the entrance was done with the ship's motor sailer. Inside of the Bay all soundings were taken from a pulling boat. An 18-foot dinghy drawing about 1 1/2 feet of water was used. Most of the soundings inside of the Bay were taken with a pole marked to feet and tenths. Positions 1-69p are minus soundings taken on mud and sand bars with a level and rod. Positions 70-151f and 53-109g were taken by walking around the edge of mud and sand bars at low water and taking positions at the water's edge.

Description.

Since no tidal data from the gauge at Los Angeles Harbor was available on board for simultaneous comparison with the portable automatic gauge at Newport Bay for establishing a datum plane for reduction of soundings,

hydrographic sheets and records are being sent in without soundings reduced or plotted.

At present Newport Bay is restricted to shallow draft boats on account of the condition of the entrance. Considerable dredging has been done in the Bay and at present a draft of 16 feet can be taken from above the entrance to the western end of the Bay. A project is now underway for the construction of an east jetty and the dredging of a channel through the entrance 25 feet deep at M.L.L.W. and 300 feet wide. The northern arm of the Bay is quite shallow and practically no navigation is carried on further north than the bridge which is the northern limit of the 1:5,000 sheet.

Tidal currents in the Bay were quite strong and considerable difficulty was encountered in running sounding lines normal to the streams with a pulling boat on account of the variation of the current over the shoals and in the deeper dredged channels. Lines were run in all channels in the direction of the current in addition to the lines run normal to the streams. Maximum tidal currents in the entrance are approximately 4 knots or even greater at times.

The entrance is narrow and breaks clear across in stormy weather. The bar is shifty and changes considerably with every storm. This section of the coast, however, is free from bad storms so that the entrance is passable most of the time for small boats. The shoal part of the bar to the eastward of the main channel is breaking most of the time, however.

The shore line on the 1:5,000 smooth sheet was merely sketched on as no facilities were to be had on board for accurately enlarging it. For this reason it was left in pencil and should be re-transferred from the topographic sheet with a pantograph before being inked.

Tides.

A portable automatic tide gauge was run for 30 consecutive days on the city dock at Balboa. This gauge should be compared with simultaneous observations from the gauge at Municipal Dock No. 1 at Los Angeles Harbor to establish a datum plane for reduction of soundings. A plain staff gauge was maintained near the entrance to the Bay and read by an observer while sounding in this locality. Simultaneous observations with the portable automatic gauge at the city dock, Balboa, were taken on April 26th to 28th. A plain staff gauge was also maintained in the lagoon at the northern end of Newport Bay and read by an observer while sounding in this locality. Simultaneous observations of this staff with the portable automatic gauge at city dock, Balboa, were taken on April 26th to 28th. The positions of the various tide staffs are shown on Boat Sheet A, 1:10,000.

The following tidal data has been sent in with the field records of this survey: Tide rolls of the portable automatic gauge, City Dock, Balboa, March 30 - April 29; Tabulated hourly heights for this gauge (these have been checked); Computations, Tides, High and Low Waters (Form 138) for a 29 day run of the autoportable gauge at city dock, Balboa; One volume tides at lagoon, northern end of Newport Bay; One volume tides, entrance to Newport Bay; One volume, tides city dock Balboa; Simultaneous observations-computations for staffs at north end and entrance with automatic gauge, city dock Balboa (using datum derived from 29 day run only).

Draft into harbor:

A greatest draft of 6 feet at M.L.L.W. can at present be carried into Newport Bay. The shoalest part is $\frac{1}{4}$ mile north of the entrance.

For reduction of the soundings the following tide staffs should be used:

1-86 a - North end.
1b - 110 b - North End.
110c - 120 c - Automatic gauge at city dock.
1c - 40 c - " " " " "
41c - 83 c - North end.
83c - 95 c - Automatic gauge.
1a - 110 d - Entrance.
96c - 124 c - City dock, Balboa.
1d - 140 d - City dock, Balboa.
1e - 49 e - City dock, Balboa.
1f - 69 f - City dock, Balboa.
69f - 151 f - City dock or entrance, according to position.
1g - 130 g - City dock, Balboa.
1h - 64 h - City dock, Balboa.
1j - 8 j - City dock, Balboa.
9j - 66 j - Entrance.
1k - 16 k - City Dock, Balboa.
17k - 68 k - Entrance.
69k - 138 k - City Dock, Balboa.
1l - 75 l - City dock, Balboa.
76l - 124 l - City dock or entrance gauge according to position.
1m - 14 m - City dock.
14m - 56 m - City dock or entrance according to position.
1n - 11 n - City dock, Balboa.
1p - 59 p - City dock, Balboa.

STATISTICS, 1:10,000 SHEET.

Date.	Letter.	Vol.	Pos.	Soundings	Stat.Mi.	Boat.
1926						
Mar. 31	a	1	86	751	7.0	Dinghy
Apr. 1	b	1	120	919	7.7	"
2	c	1	25	150	1.2	"
2	c	2	70	626	4.3	"
20	a	6	152	369	13.8	Motorsailer
21	b	6	153	351	14.7	"
22	c	6	177	490	21.9	"
23	d	7	110	289	9.1	"
Totals:	-	-	893	3945	79.7	-

STATISTICS, 1:5,000 SHEET.

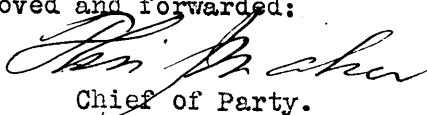
Date.	Letter.	Vol.	Pos.	Soundings.	Stat.Mi.	Boat.
1926						
Apr. 2	c	2	29	239	1.7	Dinghy
6	d	2	140	1152	9.2	"
7	e	3	49	345	2.4	"
8	f	3	151	512	7.2	"
9	g	3	130	584	7.7	"
10	h	3	16	121	0.9	"
10	h	4	48	365	2.7	"
12	j	4	66	470	3.8	"
13	k	4	122	1050	7.5	"
13	k	5	16	144	1.1	"
14	l	5	124	922	8.5	"
15	m	5	56	459	3.1	"
24	n	5	11	76	0.6	"
May 4	p	8	69	69	-	Levels
Totals:	-	-	1027	5508	56.4	-
TOTALS - BOTH SHEETS:			-	1920	9543	136.1
			-			-

Respectfully submitted,



Lieutenant (j.g.)

Approved and forwarded:



Chief of Party.

C. & G. SURVEY

L. & A.

JUL 18 1926

Acc. No.

AND REFER TO NO. 11-DRM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

January 14, 1927.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4545

Newport Bay, California

Surveyed in 1926

Instructions dated January 21, 1926 (GUIDE)

Chief of Party, T. J. Maher.

Surveyed by T. B. Reed.

Protracted by T. B. R.

Soundings plotted by H. E. MacEwen.

Verified and inked by J. D. Torrey.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of development satisfy the General Instructions except that additional lines should have been run in the vicinity of the submarine valley and around the two piers shown on the sheet. A better determination of the contour of the valley would have been obtained if lines had been run at right angles to the axis of the valley instead of the system used.
3. The plan and extent of development satisfy the specific instructions.
4. The information is sufficient for drawing the usual depth curves.
5. The sounding line crossings are excellent.
6. The protracting only was done by the field party. The customary plotting of soundings was omitted owing to the correct datum plane not being available (See Descriptive Report).
7. The junctions with H. 4546 and H. 4560 will be taken up in the reviews for those sheets.

A comparison of this survey with H. 1786 (surveyed in 1887) containing a detailed development of the head of the submarine

valley, discloses some variations in depths. While a slight shifting in bottom may have taken place, the new development is not close enough to warrant a conclusion that there has been a marked change in the general configuration of the bottom. It is therefore recommended that for charting purposes the work on H. 1786 be used supplemental to the work on the new survey. It is to be noted that the new survey failed to get the deepest soundings in the head of the valley.

8. While the survey is adequate for the purpose intended, additional work should be done to develop the full extent of the submarine valley. This area was doubtless omitted by the launch party on account of lack of equipment for deep sounding work. The area has, however, not been covered by the ship work (H. 4560) and the work on the old surveys is very sparse in this vicinity. Depths should also be obtained along the faces of both piers shown on the sheet.
9. Character and scope of field operations - good.
Field drafting - excellent.
10. Reviewed by A. L. Shalowitz, December, 1926.

Approved:

A. L. Shalowitz

Chief, Section of Field Records (Charts)

L. O. Pollock

Chief, Section of Field Work (H. & T.)

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 11-DRM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

January 14, 1927.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4546

Newport Bay, California.

Surveyed in 1926

Instructions dated January 21, 1926 (GUIDE)

Chief of Party, T. J. Maher.

Surveyed by T. B. Reed.

Protracted by T. B. R.

Soundings plotted by H. E. MacEwen.

Verified and inked by J. D. Torrey.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of development satisfy the General Instructions except that it would have probably been better to have run more longitudinal lines in the dredged channels and fewer cross lines.
3. The plan and extent of development satisfy the specific instructions except that it would have been desirable to have had more soundings at the entrance between the sand spit and the 6-foot curve.
4. The information is sufficient for drawing the usual depth curves.
5. The sounding line crossings are in many cases unsatisfactory. The trouble in practically every case seemed to be with the cross lines. Shoal soundings jutting out into the dredged channel produced ribbon depth curves. Very few of these discrepancies could be corrected with the information at hand. The cause of these discrepancies is probably a combination of circumstances such as the scale of the survey, failure to note slowing of boat

at inshore end of cross lines, failure to allow for turns in the lines, difficulty of controlling cross lines due to currents, and perhaps a general failure to observe a degree of care in the execution of the survey commensurate with the scale. Although it is felt that these irregularities in the crossings are more apparent than real, yet there is no basis for arbitrarily adjusting the soundings on the lines in the absence of any illuminating notes in the records. The time intervals were therefore rigidly adhered to.

6. The protracting only was done by the field party. The customary plotting of soundings was omitted owing to the correct datum plane not being available (See Descriptive Report).
7. The junction with H. 4545 is satisfactory.
8. No additional work is necessary unless it is desired better to develop the area at the entrance outside of the sand spit.
9. Character and scope of field operations - good.
Field drafting - good.
10. The shoreline on this sheet was transferred in the office from a photographic enlargement of the topographic sheet.
11. Reviewed by A. L. Shalowitz, January, 1927.

Approved:

A. L. Shalowitz

Chief, Section of Field Records (Charts)

L. O. Pollard

Chief, Section of Field Work (H. & T.)

Hydrographic Sheet No. 4545.

"California"

This sheet covers survey of approaches to Newport Bay and the upper part of the Bay.

The work appears to be well and carefully done and develops Hydrographic conditions satisfactory.

Drafting by Field Party and plotting by the Office satisfactory.

John D. Torrey

12/22/26

Hydrographic Sheet No. 4546

California.

This sheet covers Newport Bay from Entrance to the upper part covered on Sheet 4545

The area surveyed is well surveyed and delineates the Channel and numerous shoals in a satisfactory manner. No additional work appears necessary.

Practicing by Field Party and plotting by the office satisfactory.

John D. Torrey
12/22/24.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4545

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. _____

REGISTER NO. 4545

State CaliforniaGeneral locality Southern CoastLocality Approaches to Newport Bay and Upper Part of Bay
Newport BayScale 1:10,000 Date of survey April-May, 192 6.Vessel GUIDEChief of Party Thos. J. MaherSurveyed by Thos. B. ReedProtracted by Thos. B. ReedSoundings penciled by H. E. MacEwenSoundings in ~~fathoms~~ feetPlane of reference M.L.L.W.

Subdivision of wire dragged areas by _____

Inked by J. D. TorreyVerified by J. D. TorreyInstructions dated January 21, 192 6.Remarks: Sheet sent in to office without penciled soundings.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4546

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. _____

REGISTER NO. 4546

State _____ California _____

General locality _____ Southern Coast _____

Locality _____ Newport Bay _____

Scale 1:5,000 _____ Date of survey April-May, 1926.

Vessel _____ GUIDE _____

Chief of Party _____ Thos. J. Maher _____

Surveyed by _____ Thos. B. Reed _____

Protracted by _____ Thos. B. Reed _____

Soundings penciled by *H. F. MacEwen* _____

Soundings in ~~fathoms~~ feet

Plane of reference _____ M.L.L.W. _____

Subdivision of wire dragged areas by _____

Inked by *J. D. Torrey* _____

Verified by *J. D. Torrey* _____

Instructions dated January 21, 1926.

Remarks: Sheet sent in to office without penciled soundings.

4545 Add'l. Wk.

4545 Add'l. Wk.

Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
....., Director	
<div>U. & S. SURVEY L. & A. MAY 26 1928 Acc. No.</div>	
State: California.....	
DESCRIPTIVE REPORT	
<div>Topographic Hydrographic</div>	Sheet No. 4545 Add'l. Wk.
LOCALITY	
Southern Coast	
Approaches to Newport Bay	
1928	
CHIEF OF PARTY	
F.G. Engle	

GOVERNMENT PRINTING OFFICE

2-23-1

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 4545 ADD'L. VVW.

The following statistics will be submitted with the
cartographer's report on the sheet:

Number of positions on sheet . . 75 .

Number of positions checked . . 40 .

Number of positions revised . . 0 .

Number of soundings recorded . . 72 .

Number of soundings revised . . 1 .

Number of signals erroneously

plotted or transferred 0 .

Date: - - Aug. 6, 1928 - - - - -

Cartographer: - Frank G. Erskine - - - - -

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

Prepared in Office-Field Records

REG. NO.

4545 Add'l. WK.

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No.

REGISTER NO.

4545 Add'l. Work

State California

General locality Southern Coast

Locality Approaches to Newport Bay

Scale 10,000 Date of survey Jan. 27, 1928

Vessel Discoverer

Chief of Party F. G. Engle

Surveyed by F. G. E.

Protracted by

Soundings penciled by

Soundings in fathoms feet

Plane of reference M. L. L. W.

Subdivision of wire dragged areas by

Inked by F. G. Erskine

Verified by F. G. E.

Instructions dated, 192

Remarks:

7. No additional work is necessary here.
8. Reviewed by A. L. Shalowitz, August, 1928.

Approved:

Chief, Section of Field Records (Charts)

Chief, Section of Field Work (H. & T.)

DEPARTMENT OF COMMERCE

AND REFER TO NO. 11-DRM

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

August 8, 1928.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4545 (Additional Work)

Submarine Valley off Newport, Calif.

Surveyed in 1928

Instructions dated December 16, 1927 (DISCOVERER)

Chief of Party, F. G. Engle.

Surveyed by F. G. E.

Protracted and soundings plotted by field party.

Verified and inked by F. G. Erskine.

1. The purpose of this survey was to develop the submarine valley off Newport and to take soundings on the face of the two piers shown on the sheet.
2. The records conform to the General Instructions with the exception that the right and left objects on all the positions were interchanged in the original recording.
3. The work satisfies the specific instructions and a proper junction has been effected between the inshore work in this vicinity (H. 4545) and the offshore work (H. 4560). However, at the head of the submarine valley very few soundings were obtained. The deep soundings from H. 1786 should therefore be used to supplement the work on this survey as there is no indication that any marked changes have taken place here.
4. The depth curves at the head of the valley represent a combination of the information on H. 4545 and H. 1786.
5. The usual field plotting was done by the field party and was excellent.
6. The junctions with the work on the original survey, H. 4545, and with H. 4560 are satisfactory.

Report on sheet #H 4545 Add. Wk.
Chief of Party - F. H. Engle
Projected by the full Party
Verified & linked by F. H. Engle

Surveyed in 1928
Surveyed by F. H. Engle
Soundings plotted by the full Party

1. The sounding records were complete. ✓
2. The projecting was very accurate. Fifty per cent ✓
3. The positions were checked and not one was erroneous ✓
3. The soundings were plotted accurately. Soundings ✓
were taken between positions in only three instances.
consequently the time interval was not involved to an extent.
4. The work was legible and the sheet was fairly clear.
5. The drafting conformed to the General Instructions ✓
except that no depth curves were sketched in.

Respectfully submitted
F. H. Engle

May 26, 1928.

11

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
1 volume of sounding records for

HYDROGRAPHIC SHEET 4548 add'l.

Locality: **SOUTHERN CALIFORNIA**

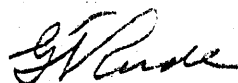
Chief of Party: **F. G. Engle, 1928.**

Plane of reference is **M. L. L. W.**

3.5 ft. on tide staff at **Los Angeles Harbor.**

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.



Chief, Division of Tides and Currents.

Statistics for Hydrographic Sheet 4545 Add'l Wk

Off Newport Pier

Jan.1928

Vol.No.:	Day :	Date :	No.Sdgs.:	No.Pos.:	Stat.Mi.
1	: A	: Jan.27:	72	: 75	: 7.2